

CLAIMS

1. A method of forming spaced conductive regions associated with a semiconductor construction, comprising:

forming a construction which includes:

a first electrically conductive material over a semiconductor substrate, and openings extending through the first electrically conductive material and into the semiconductor substrate; and

a second electrically conductive material within the openings and over the first electrically conductive material, the second electrically conductive material being different from the first electrically conductive material and being in electrical connection with the first material; and

subjecting the construction to anodic dissolution; the first electrically conductive material being electrically connected to a power source during the anodic dissolution; the second electrically conductive material within the openings becoming electrically isolated from the first electrically conductive material during the anodic dissolution and remaining within the openings as the spaced conductive regions after the anodic dissolution.

2. The method of claim 1 wherein the second electrically conductive material is in physical contact with the first electrically conductive material prior to the anodic dissolution; and wherein the second electrically conductive material becomes physically isolated from the first electrically conductive material during the anodic dissolution.

3. The method of claim 1 wherein the second electrically conductive material is oxidized during the anodic dissolution; and wherein the oxidation of the second electrically conductive material is more rapid than any oxidation of the first electrically conductive material during the anodic dissolution.

4. The method of claim 1 the first electrically conductive material comprises tungsten and the second electrically conductive material comprises one or more of platinum, rhodium, iridium, ruthenium.

5. The method of claim 1 the first electrically conductive material comprises tungsten and the second electrically conductive material comprises platinum.

6. The method of claim 1 the first electrically conductive material consists essentially of tungsten and the second electrically conductive material consists essentially of platinum.

7. The method of claim 1 wherein a continuous layer of the first conductive material remains over the substrate after the anodic dissolution; and wherein chemical-mechanical polishing is utilized to remove the remaining first conductive material from over the substrate.

8. The method of claim 1 wherein the substrate comprises an electrically insulative mass over a monocrystalline silicon base; and wherein the openings extend into the electrically insulative mass.

9. A method of forming capacitor constructions, comprising:
 - providing a substrate;
 - forming a first electrically conductive material over the substrate;
 - forming openings extending through the first electrically conductive material and into the substrate;
 - forming a second electrically conductive material within the openings and over the first electrically conductive material, the second electrically conductive material being different from the first electrically conductive material and being in electrical contact with the first electrically conductive material;
 - subjecting the second electrically conductive material to anodic dissolution; the first electrically conductive material being electrically connected to a power source during the anodic dissolution; the second electrically conductive material within the openings becoming electrically isolated from the first electrically conductive material during the anodic dissolution and remaining within the openings as spaced conductive masses after the anodic dissolution;
 - forming dielectric material over the spaced conductive masses; and
 - forming capacitor electrode material over the dielectric material and capacitively separated from the conductive masses.

10. The method of claim 9 wherein the second electrically conductive material is in physical contact with the first electrically conductive material prior to the anodic dissolution; and wherein the second electrically conductive material becomes physically isolated from the first electrically conductive material during the anodic dissolution.

11. The method of claim 9 wherein the second electrically conductive material is oxidized during the anodic dissolution; and wherein the oxidation of the second electrically conductive material is more rapid than any oxidation of the first electrically conductive material during the anodic dissolution.

12. The method of claim 9 wherein the second conductive material is formed to only partially fill the openings.

13. The method of claim 12 wherein the second electrically conductive material narrows the openings, and further comprising a protective material within the narrowed openings prior to the anodic dissolution.

14. The method of claim 13 wherein the protective material comprises photoresist.

15. The method of claim 13 wherein the protective material comprises PSG.

16. The method of claim 9 wherein the second conductive material is formed to entirely fill the openings.

17. The method of claim 9 wherein the first electrically conductive material and second electrically conductive material are oxidized during the anodic dissolution, and wherein the second electrically conductive material is oxidized more rapidly than the first electrically conductive material during the anodic dissolution.

18. The method of claim 9 the first electrically conductive material comprises tungsten and the second electrically conductive material comprises one or more of platinum, rhodium, iridium, ruthenium.

19. The method of claim 9 wherein at least some of the first conductive material remains over the substrate after the anodic dissolution; and wherein chemical-mechanical polishing is utilized to remove the remaining first conductive material from over the substrate.

20. The method of claim 9 wherein the substrate comprises an electrically insulative mass over a monocrystalline silicon base; and wherein the openings extend into the electrically insulative mass.

21. A method of forming capacitor constructions, comprising:
 - providing a substrate;
 - forming a first electrically conductive material over the substrate;
 - forming openings extending through the first electrically conductive material and into the substrate;
 - forming a second electrically conductive material within the openings and over the first electrically conductive material, the second electrically conductive material being different from the first electrically conductive material, the second electrically conductive material only partially filling the openings, the second electrically conductive material being in electrical contact with the first electrically conductive material;
 - subjecting the second electrically conductive material to anodic dissolution; the first electrically conductive material being electrically connected to a power source during the anodic dissolution; the second electrically conductive material within the openings becoming electrically isolated from the first electrically conductive material during the anodic dissolution and remaining within the openings as spaced conductive masses after the anodic dissolution;
 - removing at least some of the first conductive material from over the substrate;
 - forming dielectric material within the partially filled openings and over the spaced conductive masses; and
 - forming capacitor electrode material over the dielectric material and capacitively separated from the conductive masses.

22. The method of claim 21 wherein the second electrically conductive material is in physical contact with the first electrically conductive material prior to the anodic dissolution; and wherein the second electrically conductive material becomes physically isolated from the first electrically conductive material during the anodic dissolution.

23. The method of claim 21 wherein the second electrically conductive material is oxidized during the anodic dissolution; and wherein the oxidation of the second electrically conductive material is more rapid than any oxidation of the first electrically conductive material during the anodic dissolution.

24. The method of claim 21 wherein the substrate comprises an electrically insulative material, and wherein the openings are formed to extend into the electrically insulative material.

25. The method of claim 21 wherein the substrate comprises an electrically insulative material over conductive electrical nodes, wherein the openings are formed to extend through the electrically insulative material and to the electrical nodes; and wherein the second conductive material is formed in physical and electrical contact with the electrical nodes.

26. The method of claim 25 wherein the first electrically conductive material and second electrically conductive material are oxidized during the anodic dissolution, and wherein the second electrically conductive material is oxidized more rapidly than the first electrically conductive material during the anodic dissolution.

27. The method of claim 21 the first electrically conductive material comprises tungsten and the second electrically conductive material comprises one or more of platinum, rhodium, iridium, ruthenium.

28. The method of claim 21 wherein chemical-mechanical polishing is utilized to remove the first conductive material from over the substrate.

29. The method of claim 21 wherein the substrate comprises an electrically insulative material over a monocrystalline silicon base; and wherein the openings extend into the electrically insulative material.

30. The method of claim 21 further comprising:

forming a protective material within the partially filled openings; the protective material remaining within the openings during the anodic dissolution; and

removing the protective material from within the openings prior to forming the dielectric material.

31. The method of claim 30 wherein the protective material comprises photoresist.

32. The method of claim 30 wherein the protective material comprises PSG.

33. The method of claim 21 wherein the conductive masses have sidewall surfaces along the mass, and further comprising:

removing at least some of the substrate to expose at least portions of the sidewall surfaces of the conductive masses; and

forming the dielectric material along the exposed portions of the sidewall surfaces.

34. A method of forming capacitor constructions, comprising:
 - providing a substrate;
 - forming a first electrically conductive material over the substrate;
 - forming openings extending through the first electrically conductive material and into the substrate;
 - forming a second electrically conductive material within the openings and over the first electrically conductive material, the second electrically conductive material being different from the first electrically conductive material, the second electrically conductive material entirely filling the openings;
 - subjecting the second electrically conductive material to anodic dissolution; the first electrically conductive material being electrically connected to a power source during the anodic dissolution; the second electrically conductive material within the openings becoming electrically isolated from the first electrically conductive material during the anodic dissolution and remaining within the openings as spaced conductive masses after the anodic dissolution; the spaced conductive masses having sidewall surfaces;
 - removing the first conductive material from over the substrate;
 - removing some of the substrate to expose at least portions of the sidewall surfaces of the conductive masses;
 - forming dielectric material over the spaced conductive masses and along the exposed portions of the sidewall surfaces; and
 - forming capacitor electrode material over the dielectric material and capacitively separated from the conductive masses.

35. The method of claim 34 wherein a sufficient amount of the substrate is removed to expose an entirety of the sidewall surfaces.

36. The method of claim 34 wherein the substrate comprises an electrically insulative material, and wherein the openings extend into the electrically insulative material.

37. The method of claim 34 wherein the substrate comprises an electrically insulative material over conductive electrical nodes, wherein the openings are formed to extend through the electrically insulative material and to the electrical nodes; and wherein the second conductive material is formed in physical and electrical contact with the electrical nodes.

38. The method of claim 34 wherein the first electrically conductive material and second electrically conductive material are oxidized during the anodic dissolution, and wherein the second electrically conductive material is oxidized more rapidly than the first electrically conductive material during the anodic dissolution.

39. The method of claim 34 the first electrically conductive material comprises tungsten and the second electrically conductive material comprises one or more of platinum, rhodium, iridium, ruthenium.

40. The method of claim 34 wherein chemical-mechanical polishing is utilized to remove the first conductive material from over the substrate.

41. The method of claim 34 wherein the substrate comprises an electrically insulative material over a monocrystalline silicon base; and wherein the openings extend into the electrically insulative material.